

Work Order ID 143677

March 18, 2016 4:24:07 PM

143677

Please cut Sunday

for a N/C

Shipping ASAP or

Mar 22/

Item ID: D4101-5

Accept

N900040100

Setup Start

NS1

Revision ID: URF 15-636

Item Name: Spring

Stop

NS2

Start Date: 3/20/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 3/22/2016 Req'd Qty: 2.00

2

Customer:

U/R

** 01/14/21*

Reference:

Approvals: Process Plan: *SH* Date: *20160318*

Tooling:

Date:

Run Start

NR1

QC: Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4101	<i>C1 B 16.03.21</i>

100 0.00

100

FLOW WATER JET

Waterjet

Memo

FLOW CNC Waterjet

1-Cut as per Dwg D4101

Dwg Rev: *B*

Prog Rev: *B*

2-Deburr if necessary

110 0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

Quality Control

120 0.00

120

QC8- Inspect parts - second check

QC

Memo

Quality Control

(2) 16/03/21

(2) 16/03/21

(2) 16-03-21

DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 143677

March 18, 2016 4:24:07 PM

143677

Page 2

Item ID: D4101-5 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: URF 15-636 Stop ***NS2***
Item Name: Spring
Start Date: 3/20/2016 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 3/22/2016 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Identify as per dwg & Stock Location: _____	0.00							
150									
Packaging	Memo	0.00							
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

DAS
6
500

MAR 22 2016

MCS

MAR 22 2016

MCS

MAR 22 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Picklist Print

March 18, 2016 4:24:12 PM

Page 1

Work Order ID: 143677

143677

Parent Item: D4101-5

D4101-5

Parent Item Name: Spring

Start Date: 3/20/2016

Required Date: 3/22/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 10.07.07 new issue DD verf:EC
10.09.07 revB DD verf:EC

IPP Rev:A

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MDELRINS0.125

Purchased

No

sf

6.0900

0.025263

MDELRINS0.125

02/16/2016

Black Delrin Sheet .125

Location

Loc Qty

Loc Code

MAT019

6.09

~~119256~~

1.4

~~124463~~

4.69

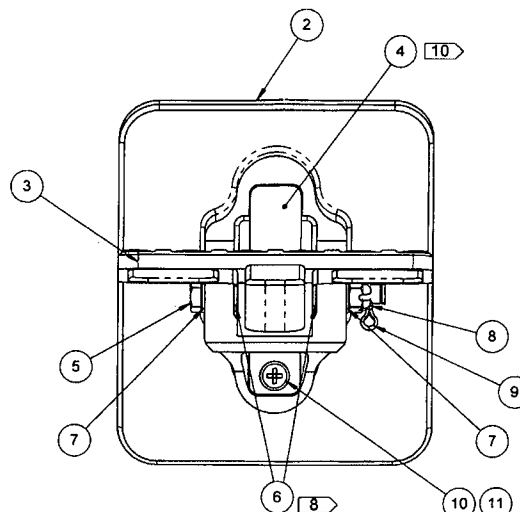
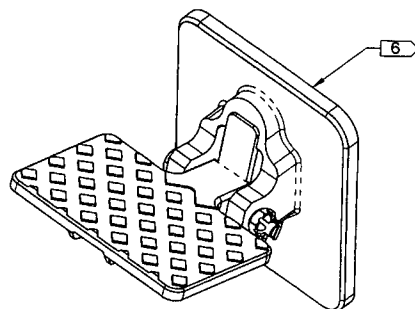
1

16.03.21

Dark grey Lexan

Batch: 134389

MLEXS.125-F60029-04



D4101-041 PRE-FLIGHT STEP ASSEMBLY

NOTES:

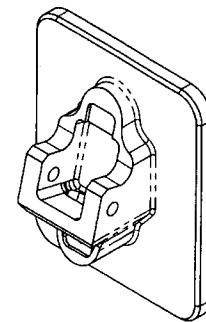
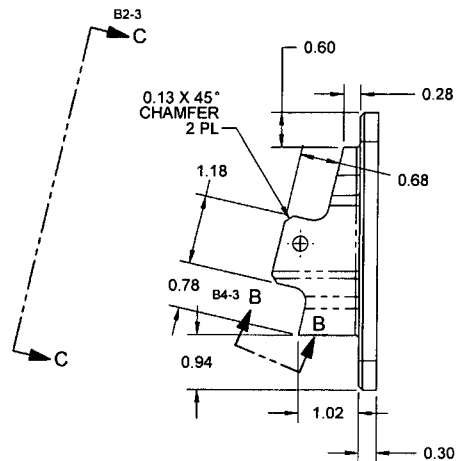
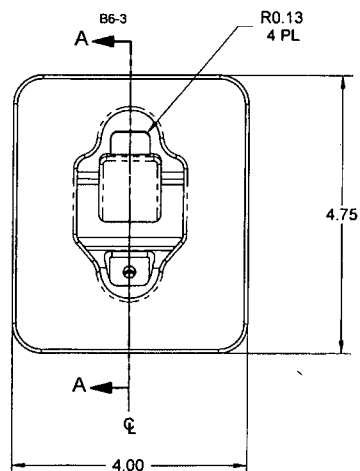
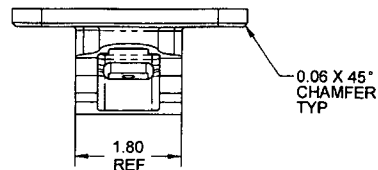
- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: NONE
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4101-041" USING FINE POINT PERMANENT INK MARKER BACK SURFACE
- 7) WEIGHT: 1.18 lbs
- 8) INSTALL NAS1149D0432J WASHER IN BETWEEN STEP AND BRACKET MATING FACES
- 9) TORQUE AN525832R SCREW TO 15-25 in-lb
- 10) TEXTURED SIDE TO BOTTOM

ITEM	QTY	PART NUMBER	DESCRIPTION
1	X	D4101-041	PRE-FLIGHT STEP ASSEMBLY
2	1	D4101-1	BRACKET
3	1	D4101-3	STEP
4	1	D4101-5	SPRING
5	1	AN4-22	BOLT
6	2	NAS1149D0432J	WASHER
7	2	NAS1149D0463J	WASHER
8	1	AN310-4	NUT
9	1	MS24665-136	COTTER PIN
10	1	AN525-832R6	SCREW
11	1	MS21209C0815	HELICOIL

120 160312

RELEASED
2010-08-23

B	NAS1149D0432J WAS NAS1149D0416J (ZN D3-1); ADD SCREW AND HELICOIL (ZN D3-1 & B1-3); RE-DESIGN D4101-5 (ZN B4-5)		RF	10.08.05
A	NEW ISSUE		RF	10.07.12
REV.	DESCRIPTION		BY	DATE
DESIGN	RF	DART AEROSPACE LTD		
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA		
CHECKED	RF	DRAWING NO.	REV. B	
MFG. APPR.	RF	D4101	SHEET 1 OF 5	
APPROVED	RF	TITLE	SCALE	
DE APPR.	RF	PRE-FLIGHT STEP ASSEMBLY	NTS	
DATE	10.08.05	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		



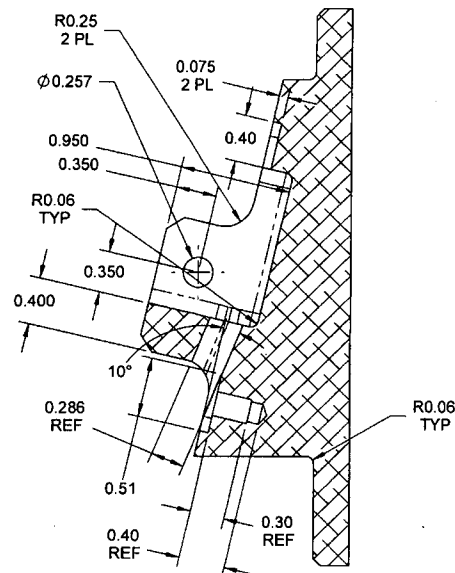
D4101-1 BRACKET

NOTES:

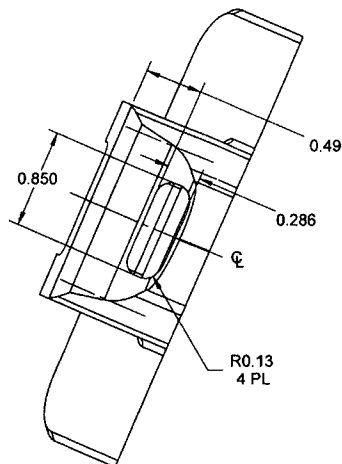
- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.85 lbs

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2010-08-23

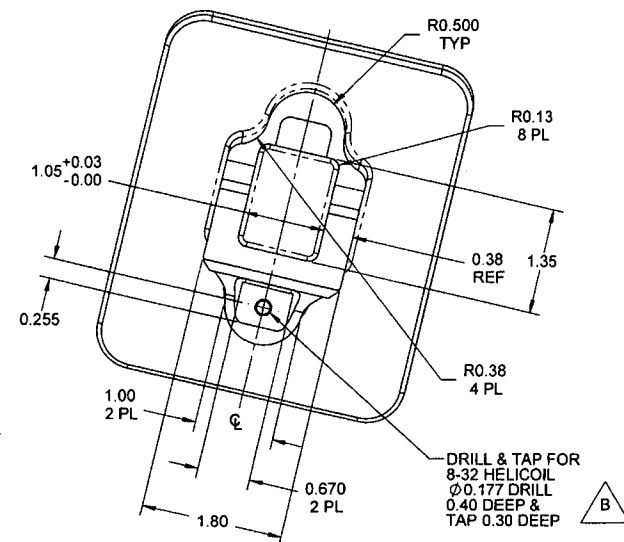
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4101	SHEET 2 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	PRE-FLIGHT STEP ASSEMBLY	NTS
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SECTION A-A C7-2
SCALE 2X



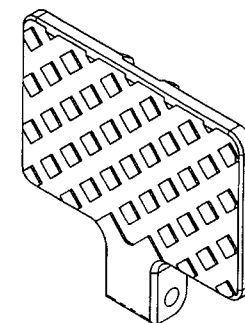
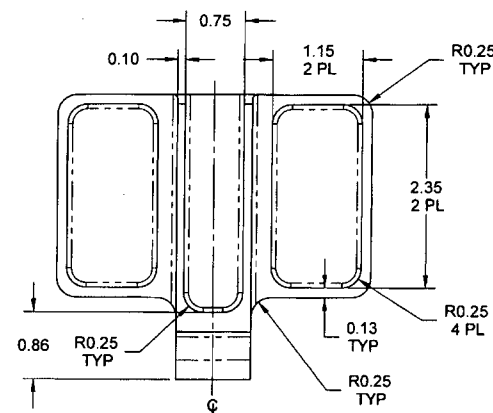
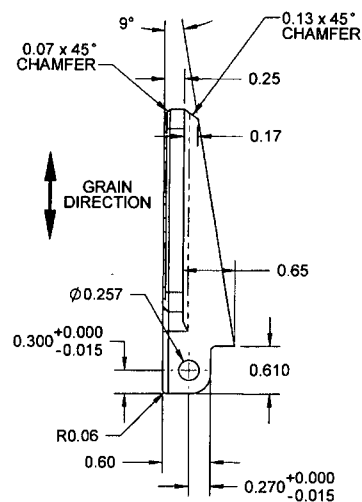
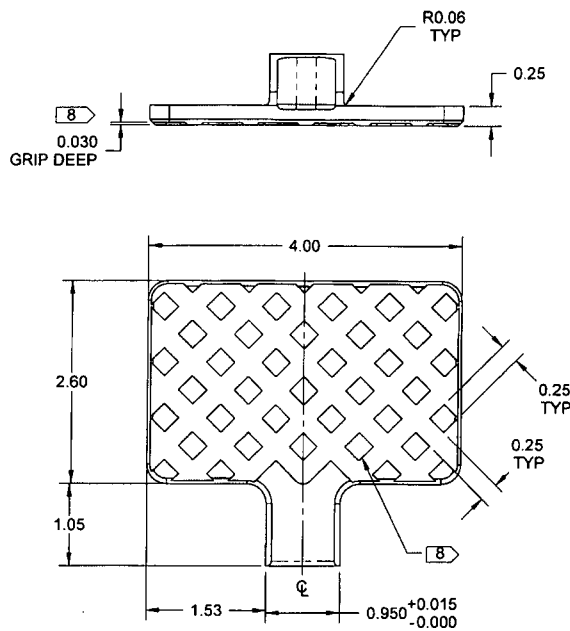
VIEW B-B C4-2
SCALE 2X



VIEW C-C D4-2
SCALE X1.5

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MFG. APPR.	RF	D4101	SHEET 3 OF 5
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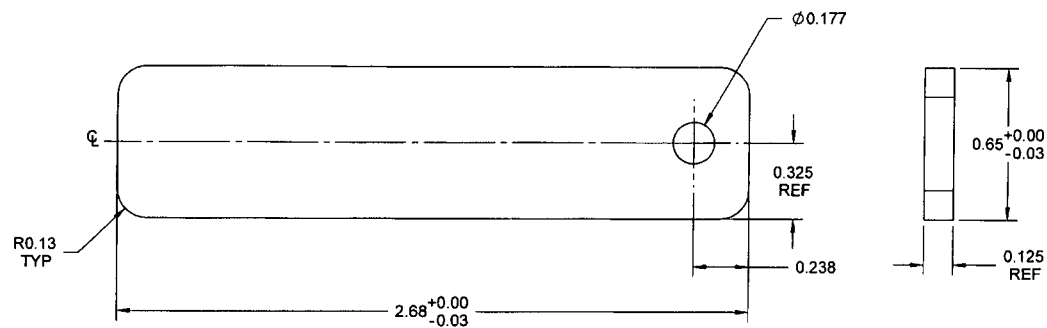
D4101-3 STEP

RELEASED
2010-08-23

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.27 lbs
- 8) MACHINE 0.25 x 0.25 GRIP 0.030 DEEP AT 45° PATTERN 0.25 APART

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4101	SHEET 4 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	PRE-FLIGHT STEP ASSEMBLY	NTS
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D4101-5 SPRING



NOTES:

- 1) MATERIAL: F60029-GY3778 DARK GREY LEXAN SHEET (HEAVY HAIRCELL TEXTURE) 0.125 THICK
REF DART SPEC MLEXS.125-F60029-04
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.01 lbs

RELEASED
2010-08-23

AWD

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4101	SHEET 5 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	PRE-FLIGHT STEP ASSEMBLY	NTS
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